

DO-IT-YOURSELF LAMPSHADE KIT

BACKGROUND OF THE INVENTION

1. Field of the Invention.

This invention relates to lamp shades, and especially a method for making and altering lamp shades that can be practiced in the home.

2. The State of the Art.

Ever since people starting using small light sources, whether from electric bulbs, from small gas mantles, or oil lamps, there has been a desire to shade the light to create a more balanced illumination or just for decoration.

There have been various types of shades that are relatively easy to assemble. Read, Jr., in US 103,928, describes a paper or cardboard shade secured in a conical form with wire paper clip-like fasteners. Spellman, in US 1,309,263, and Baker, in US 1,477,991, describe cardboard or paper lamp shades that can be formed into a conical shape and held with a tab and slot configuration. Laws, in US 86,987, describes a lamp shade having similar tabs and slots but made with sheet metal. Huang, in US 4,747,031, describes a lamp shade held in a conical form by a wire fastener akin to those used in spiral-bound notebooks.

Other lamp shade use a plurality of panels. For example, Heise, in US 3,582,643, Mann, in US 4,278,896, and Hagelthorn, in US 4,176,529, each discloses a lamp shade made from a plurality of panels, optionally where a panel has a design on it; Huang, in US 4,688,155, discloses multiple panels secured with wire fastener akin to those used in spiral-bound notebooks. Goodloe, in US 1,813,492, discloses the use of wood panels. Shapiro, in US 1,863,767, discloses the use of parchment paper to cast light both up and down. Leitner et al., in US 5,211,474, disclose a

do-it-yourself lamp shade kit with a pattern cutout for fabric. Hackett et al., in US 6,190,024, disclose a method for securing a lampshade to a frame.

The art is devoid of a lamp shade which can not only be made from a kit, but which can be changed after it has been used, and changed in an easily-implemented manner so that even children can have fun creating and using new lamp shades.

SUMMARY AND OBJECTS OF THE INVENTION

In light of the foregoing, one object of this invention is to provide a lamp shade kit that can be easily assembled. Another object is to provide such a kit where a pattern or design can be provided for the shade, and especially where the pattern or design can be changed when desired, thereby necessitating that the shade be easily disassembled and reassembled. Still another object is to provide such a kit wherein the pattern or design can be produced on a personal computer, the pattern or design printed out and then applied to the panels, and the same done as desired.

Thus, in one aspect this invention provides a lamp shade comprising a plurality of panels which, when joined, provide a conical surface having the top and bottom opened, each of the panels have a top and a bottom edge and opposing side edges, each of the side edges having a plurality of holes, adjacent panels being held together by overlapping their corresponding side edges effective to register the holes of one with the holes of the other, and inserting separately into a plurality of the registered holes a removable fastener. In a preferred embodiment, the invention further comprises a sheet of adhesive paper having a pattern or design thereon adhered to at least one of the panels and preferably to all. In another embodiment the invention comprises modifying the lamp shade so created by printing out a new pattern or design, disassembling the assembled lamp shade, applying the new pattern or design to at least one of the panels, and then reassembling the lamp shade.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 depicts the partial contents of a kit sufficient to make a basic lamp shade.

Fig. 2 depicts a partially assembled lamp shade.

5 Fig. 3 depicts an assembled lamp shade on a lamp.

Fig. 4 is a cross-section through line 4-4 in Fig. 2.

Fig. 5 is a perspective view of a strip of fasteners.

Fig. 6 is a cross-section through line 4-4 in Fig. 2 wherein the fasteners are the strip as shown in Fig. 5.

10 Figs. 7A and 7B depict a plastic fastener (7A) and a cross-section similar to Fig. 4 (7B) using such a fastener.

Fig. 8 depicts a single, hemispherical panel.

Fig. 9 depicts a series of sting lights using the panels of Fig. 8.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

15 Fig. 1 depicts the partial contents of a kit for making the instant lamp shade. The kit includes a plurality of panels 101, preferably four, which when assembled form the surface of a cone. Each of the panels includes a bottom edge 103, a top edge 105, and opposing side edges 105a/b. Preferably, all of the panels are identical. Along each of the

20 opposing side edges are a series of holes 107 positioned so that when adjacent panels are overlapped (as shown in Fig. 2), the holes in one panel register with the holes in the adjacent, overlapping panel. The panels are made of a transparent or translucent flexible plastic, although they can also be made of metal, paperboard, or the like which can be bent

25 or curved to form a frustoconical lampshade form (or other curved geometric form), which can be packed flat, and which is self-supporting in such form without a frame. Preferred materials for the panels are heat-resistant polymers such as vinyl, preferably rigid vinyl, polycarbonates, polystyrene, and the like, so long as the material is sufficient heat resistant

30 to the bulb or lamp that the plastic is no in danger of melting or burning;

additional preferred materials are metal sheet such as aluminum and brass. The kit also includes a hanger 109 which is joined to each of the panels by arms having similar holes, and which supports the conical portion of the shade through a center hole 111 or mounting ring as conventional shades are supported or mounted on a lamp. The kit also provides a multiplicity of individual fasteners 113 (preferably packaged together), such as conventional prong fasteners sold in office supply stores, and which can be of silver- or gold-colored metal, or they may be made of plastic and have button top connected to a stem made of a spring-snap or spring-pawl that is releaseable so that the fastener can be removed and reused. Alternatively, the fasteners can be provided in a strip as shown in Fig. 5, wherein the strip has a base 501 on which are secured a plurality of fasteners 503, each of which contains a pedestal 505 having one end affixed to the base and one or more prongs 507 extending from the other end of the pedestal.

The kit also preferably includes, although not shown, a sheet of printable labels, each of the labels having the geometry of a panel. These sheets are akin to standard sheets of labels and are sold by such companies as Avery Dennison Corporation, Pasedena, California, and can also be custom made, such as by LabelWorks (division of Taylor Corporation, Mankato, MN; www.labelworks.com), Nev's Ink, Inc. (Waukesha, WI; www.nevsink.com), and many others. These sheets typically have adhesive-coated paper on top of a release layer, the paper being pre-cut or pre-scored in a desired shape, and being supported on a backing. In this case, the pre-cut desire shape preferably conforms to the geometry of the panels shown in the figures, and most preferably extends out to the opposing sides. In such an embodiment, the label preferably also has a plurality of holes that correspond with those on the opposing sides of the panel, although the prong-type fasteners are designed to punch through paper and so the labels need not have pre-punched or pre-

10/022792

scored holes. Also optionally included in the kit is software that facilitates designing and printing such labels on a personal computer with a printer or similar output device. Of course, the kit may come with one or more pre-printed sheets having labels that can be adhered to one or more of the panels.

Alternatively, the kit can have the lampshade pattern printed directly on the plastic, metal, or paperboard shade.

In yet another alternative embodiment, the purchaser of the lampshade kit can access a website to design and/or download a new lampshade design. The user can be provided with communications software or can access the specific website using a standard internet service provider and conventional browser software. From the website, the user can pick a pre-made design or can use software available on the site to create a new lampshade design on-line. Thereafter, the user can either download the newly created design to print on a local printer, or the user can have the design delivered by conventional means. In the case that the designs are delivered, the design(s) created on the website are printed onto labels and/or on to new lampshade panels (paper, plastic, and/or metal) and then sent to the user by conventional delivery methods (mail, courier).

In operation, the user takes a printed sheet of labels, either pre-printed or created on a personal computer and printed on a blank sheet of labels, and affixes the label(s) to as many of the panels as desired; and/or the user selects panels having designs pre-printed thereon. Preferably the panels are plastic and, if labels are used, one label is adhered to the outside (away from the lamp bulb) of each panel. The panels could, instead, be made of paperboard, in which case a new set of blank panels is required each time the lamp shade is redesigned because the adhesive commonly used for sheets of labels typically is not releasable from paper or paperboard. Once the labels (or decals) have been adhered to the panels, a pair of panels is placed in overlapping relationship with the holes

of their side edges registered, and then a sufficient number of fasteners are used to secure the panels adjacently. Plastic fasteners are preferably transparent, optionally, colored. Finally, the hanger 109 is attached at the top edge where overlapping registered holes from two adjacent panels are located. This arrangement, shown with a partially assembled shade, is depicted in Fig. 2.

Fig. 3 shows lamp base 301 with a stand 303 on top of which is connected a completely assembled lamp shade 305.

Fig. 4 is a cross section taken along line 4-4 in Fig. 2 and shows a plastic panel 401 on top of which is adhered a label 403. Panels 405 and 407 are placed in overlapping relationship with corresponding holes registered, and a fastener 409 having prongs 411 is inserted into the hole and the prongs splayed out to secure the panels to each other.

As noted above, Fig. 5 provides a strip of removeable fasteners. Fig. 6 is a cross-sectional view as Fig. 4, but where the fasteners are the strip shown in Fig. 5. Of course, the spacing of the fasteners on the strip 501 should register with the holes 107 in each of the panels. Although not as preferred, the panels can be attached instead, or additionally, though the use of an adhesive or other mechanical fasteners (e.g., hook and loop type such as VELCRO brand) running along the line of holes 107. Still further, instead of discrete fasteners, a thong (leather), synthetic cord, wire, or fine chain can be used and threaded through the holes to secure the panels together; in this case, the panels can be held with small mechanical fasteners at a few points with the material threaded through the holes.

When the user desires, the shade is removed from the lamp and the fasteners are removed to break down the shade into its components. A new pattern or design can then be printed on a new set of labels, either designed locally or downloaded from the website, or delivered from ones selected or created on the website. The old label can be removed from

the panel and the new label adhered in its place. New labels, and/or pre-printed or blank panels can be delivered via the website. The panels and hanger, and if needed the labels, are then reassembled and the lamp shade is replaced on the lamp with a new design.

5 Fig. 7A depicts a plastic fastener having a top and an oblong, triangular base, which can be pushed through the holes in the panels, resulting in the cross-section shown in Fig. 7B.

Fig. 8 shows a hemispherical panel that is curved into a single lamp shade. Preferably, such lamps are provides as a series of string lights, as shown in Fig. 9. The light string can be of the type commonly used for holiday or Christmas decorations, a electrical wire (or twisted pair, insulated) having located at relatively equal spacing therealong a lamp. The shade is appropriately sized for the lamp, being smaller than one would typically use for a table lamp. Depending on the size of the lamp, the shade could be petite, having a height of about three inches (about 7 cm), of medium size (about 5 inches, or about 12 cm), or larger as desired. The hanger 109 can be adapted to attach to the insulated wire or to the base of the lamp.

20 The foregoing description is meant to be illustrative and not limiting. Various changes, modifications, and additions may become apparent to the skilled artisan upon a perusal of this specification, and such are meant to be within the scope and spirit of the invention as defined by the claims.

What is claimed is:

- 1 1. A lamp shade comprising:
2 a plurality of panels, each panel having a top edge, a bottom
3 edge, and opposing side edges, each side edge having
4 a plurality of holes adjacent each side edge;
5 fastener means releaseably securing two panels in adjacent
6 and overlapping relationship along their corresponding
7 side edges; and
8 means for mounting said plurality of panels on a lamp when
9 the panels are assembled together adjacently;
10 each of said panels being self-supporting, sufficiently flexible
11 to be releasably secured to adjacent panels in a curved
12 form and to be packed in a flat configuration.
- 1 2. The lamp shade of claim 1, wherein the fastener means are
2 metal prong fasteners.
- 1 3. The lamp shade of claim 1, wherein the fastener means are
2 transparent or translucent plastic, optionally colored.
- 1 4. The lamp shade of claim 1, wherein the fastener means are
2 selected from thongs, cords, wires, and chains.
- 1 5. The lamp shade of claim 1, wherein adjacent panels have
2 overlapping, registered holes, and each fastener means is inserted
3 through corresponding registered holes in the overlapping adjacent edges.

1 6. The lamp shade of claim 1, further comprising a label
2 adhered to at least one of the panels, said label having essentially the
3 same geometry as the panel to which it is adhered.

1 7. The lamp shade of claim 1, wherein the panels are made
2 from at least one of plastic, metal, and paperboard.

1 8. The lamp shade of claim 4, wherein each panel has a label
2 adhered to it.

1 9. The lamp shade of claim 1, wherein each panel has a pattern
2 pre-printed thereon.

1 10. The lamp shade of claim 1, wherein the fastening means
2 comprises a strip of fasteners.

1 11. A kit for making a lamp shade, comprising:
2 a plurality of panels, each panel having a top edge, a bottom
3 edge, and opposing side edges, each side edge having
4 a plurality of holes adjacent each side edge;
5 a set of fasteners releaseably securing two panels adjacent
6 and overlapping along their corresponding side edges;
7 means for mounting said plurality of panels on a lamp when
8 the panels are assembled together adjacently; and
9 at least one of (i) a plurality of pre-printed labels or (ii) a
10 combination of blank labels and software able to be run
11 on a personal computer for printing a pattern or design
12 on the blank labels, each of said labels having
13 essentially the same geometry as the panel to which it
14 is adhered;
15 each of said panels being self-supporting, sufficiently flexible
16 to be releasably secured to adjacent panels in a curved
17 form and to be packed in a flat configuration.

1 12. The kit of claim 11, further comprising instructions assembling
2 the lamp shade and optionally for using the software for printing on the
3 blank labels.

1 13. The kit of claim 11, wherein each fastener is insertable
2 through corresponding registered holes in overlapping adjacent edges of
3 the panels.

1 14. The kit of claim 11, wherein the fasteners are selected from
2 thongs, cords, wires, and chains.

1 15. A method for making a lampshade, comprising:
2 providing a plurality of panels, each of said panels being self-
3 supporting, sufficiently flexible to be releasably secured
4 to adjacent panels in a curved form and to be packed in
5 a flat configuration;
6 decorating at least one of said panels by means of (i)
7 applying a pre-made label to the panel, (ii) creating and
8 printing a label and then applying the label to the panel,
9 (iii) providing a panel having a decoration printed
10 thereon;
11 joining said panels in adjacent relationship to create a shade;
12 and
13 affixing a hanger to said shade to create a lamp shade.

1 16. The method of claim 15, wherein at least one panels is made
2 from plastic, metal, or paperboard.

1 17. The method of claim 15, wherein the step of creating the label
2 is done via a website.

1 18. The method of claim 15, wherein the step of providing a panel
2 having decoration printed thereon is done by ordering said panel through
3 a website.

1 19. A lighting display, comprising: a electrical wire having a series
2 of lamps disposed along its length, each lamp having associated therewith
3 a lamp shade comprising:

4 a plurality of panels, each panel having a top edge, a bottom
5 edge, and opposing side edges, each side edge having
6 a plurality of holes adjacent each side edge, and each
7 of said panels being self-supporting, sufficiently flexible
8 to be releasably secured to adjacent panels in a curved
9 form and to be packed in a flat configuration;

10 fastener means releasably securing two panels in adjacent
11 and overlapping relationship along their corresponding
12 side edges; and

13 means for mounting said plurality of panels on a lamp when
14 the panels are assembled together adjacently.

1 20. A lighting system, comprising:

2 a series of lamps electrically connected together;

3 a plurality of panels, each panel having a top edge, a bottom
4 edge, and opposing side edges, each side edge having
5 a plurality of holes adjacent each side edge, and each
6 of said panels being self-supporting, sufficiently flexible
7 to be releasably secured to adjacent panels in a curved
8 form and to be packed in a flat configuration;

9 fastener means releasably securing overlapping holes in a
10 panel;

11 each lamp having a shade formed from a single panel and
fastened with said fasteners.

1/3

FIG. 1

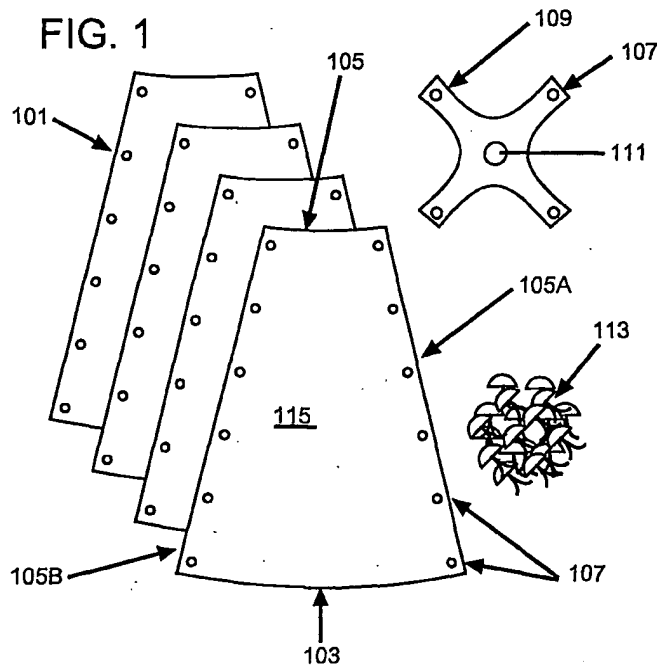


FIG. 3

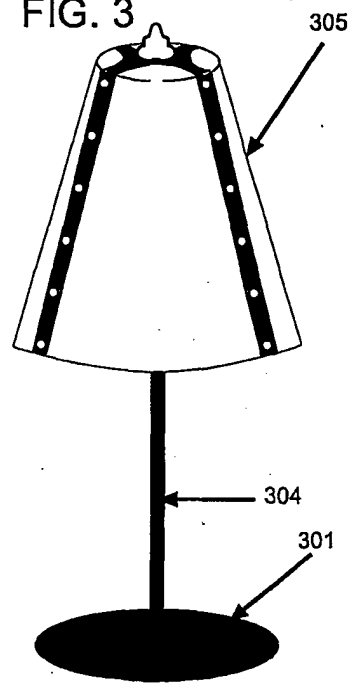
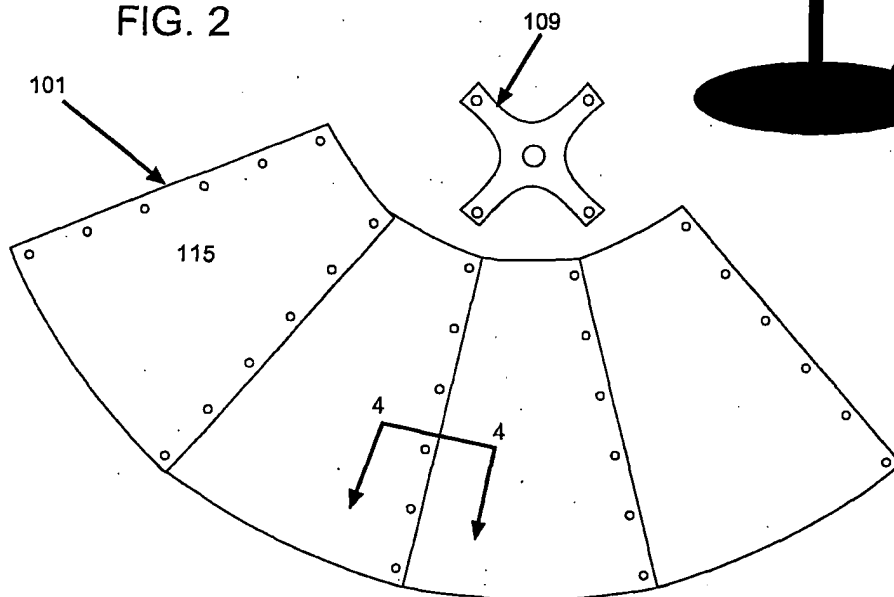
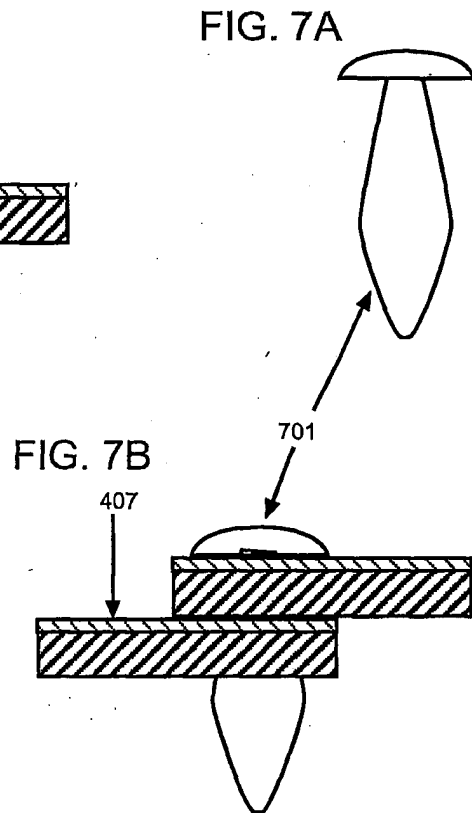
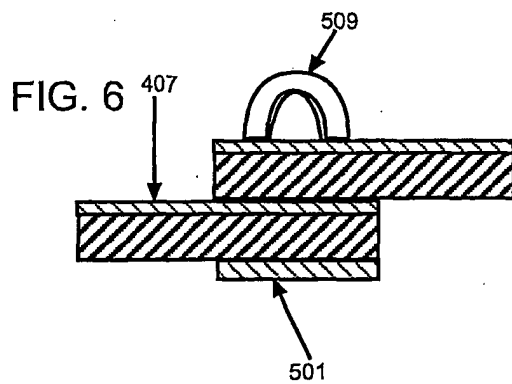
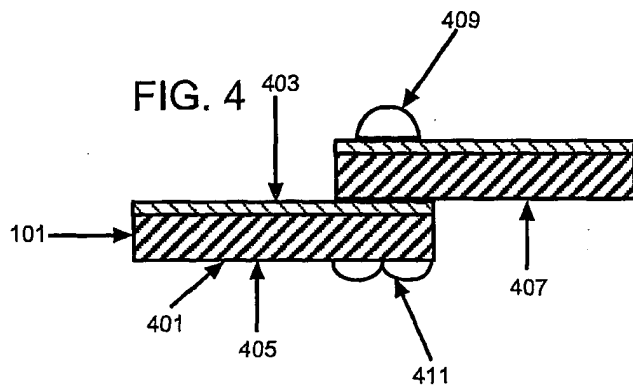
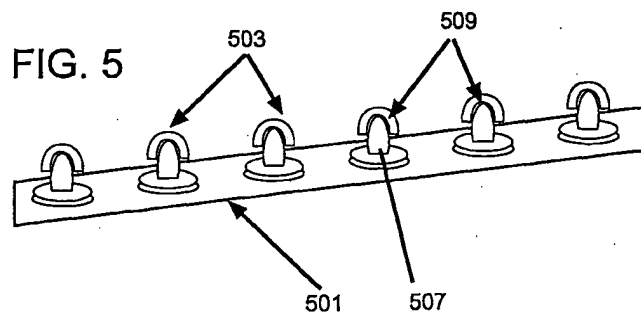


FIG. 2



2/3



3/3

FIG. 8

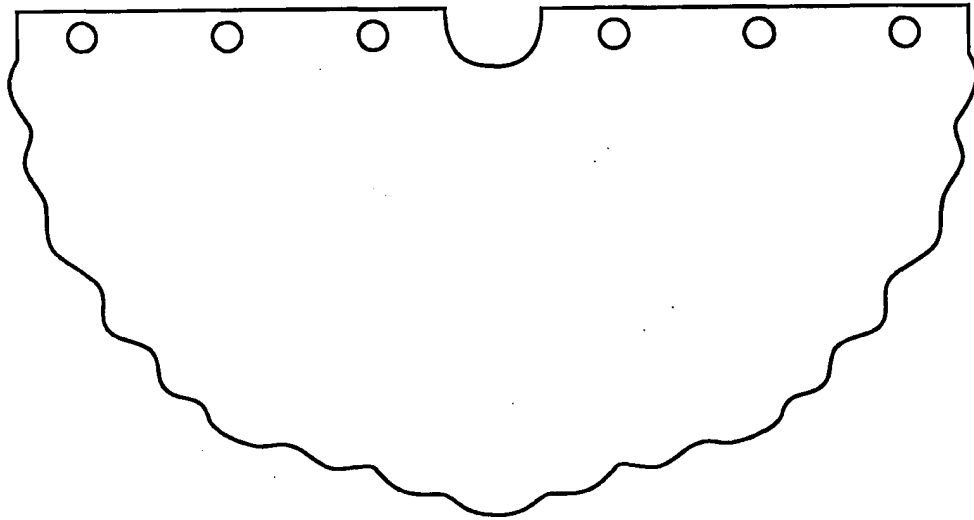
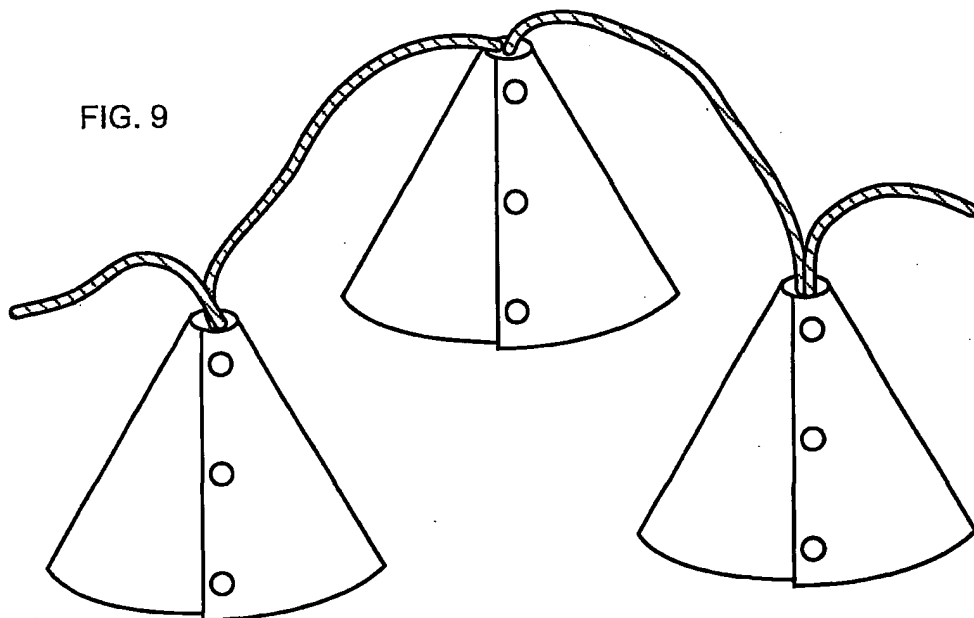


FIG. 9



INTERNATIONAL SEARCH REPORT

International Application No.

PCT/US 01/27236

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 F21V1/16 F21V1/26

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 F21V

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 86 987 A (A.D. LAWS) 16 February 1869 (1869-02-16) cited in the application the whole document	1,3,4,7, 10
A		11,15, 19,20
Y	DE 297 08 838 U (HENKELS JOCHEN DIPL DESIGNER) 7 August 1997 (1997-08-07) page 2, line 16 - line 36 page 3, line 30 -page 4, line 33 page 9, line 24 - line 34 page 10, line 24 -page 11, line 3 figures 10,13	1,3,4,7, 10
A		11,15, 19,20
	-/-	



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- *Z* document member of the same patent family

Date of the actual completion of the international search

3 December 2001

Date of mailing of the international search report

21/12/2001

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

Authorized officer

Cosnard, D

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 01/27236

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DE 298 14 542 U (SCHLEGEL MARC ; RUEDE THOMAS MICHAEL (DE)) 5 November 1998 (1998-11-05) page 2, line 4 - line 23 page 3, line 20 - line 24 page 4, line 32 - line 35 page 5, line 13 - line 34 page 6, line 33 - line 36 figures 1-4 ----	1, 4, 6, 11, 15, 19, 20
A	US 780 875 A (I. SYLENA A. DUCAN) 24 January 1905 (1905-01-24) the whole document ----	1, 11, 15, 19, 20
A	US 4 268 896 A (MANN RAY R) 19 May 1981 (1981-05-19) cited in the application abstract figures 1, 2, 5 ----	1, 11, 15, 19, 20
A	US 3 275 821 A (LEBB WALTER J) 27 September 1966 (1966-09-27) the whole document -----	1, 19

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 01/27236

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 86987	A	NONE	
DE 29708838	U	07-08-1997	DE 29708838 U1 07-08-1997 DE 29803707 U1 23-04-1998
DE 29814542	U	05-11-1998	DE 29814542 U1 05-11-1998
US 780875	A	NONE	
US 4268896	A	19-05-1981	NONE
US 3275821	A	27-09-1966	NONE